3.0 PROPOSED ACTION AND ALTERNATIVES

The Proposed Action and the Alternative Actions are discussed in the following sections.

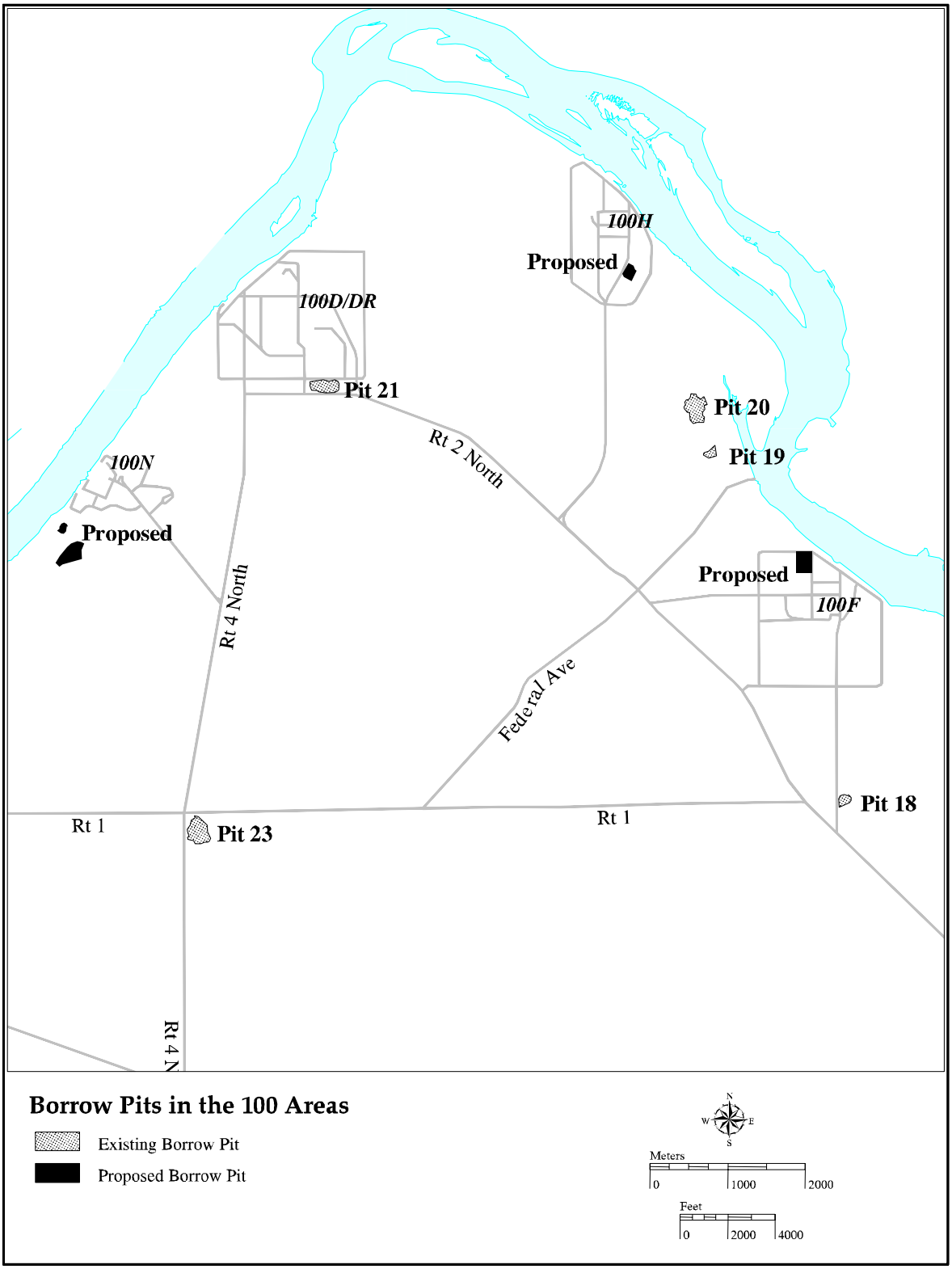
3.1 PROPOSED ACTION

The DOE proposes to obtain borrow materials from formerly used borrow pits in the 100-F, 100-H, and 100-N Areas on the Hanford Site that were not included in the *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a) or in the previous EA (DOE 2001). These former borrow pits are located within the "Pre-existing, Nonconforming" land-use areas associated with the 100-F, 100-H, and 100-N Reactor Areas of the Hanford Site, as described in the HCP EIS (DOE 1999). The "Nonconforming" land-use area designation, as described in the HCP EIS, allows for continued remediation activities in support of DOE missions for site cleanup in both "Conservation (mining)" and "Preservation" designated areas. Portions of the proposed borrow sites in the 100-F and 100-N Areas are located within 0.4 km (0.25 mi) of the Columbia River in an area designated as the Hanford Reach National Monument.

Under the Proposed Action, the DOE would reopen and activate three former borrow sites. The first is a former borrow site located north of the 105-F Reactor that is within the 100-F Reactor Area perimeter boundary. This site would provide the material needed for backfill of liquid waste sites at the 100-F Area remediation project and the reactor ISS project. The second is an area adjacent to a former borrow site located in the 100-H Area of the Hanford Site that would be excavated to support backfill needs for miscellaneous remaining waste site remediation and the ISS project in the 100-H Area. The third is a former borrow site and associated spoil pile located southwest of the 100-N Hanford Generating Plant that would provide borrow material for the 100-N and 100-K Area remedial action projects and ISS projects. The locations of the three proposed borrow sites are shown in Figure 3-1.

The total volume of materials to be recovered over the duration of remedial actions in the 100-F, 100-H, 100-K, and 100-N Areas is estimated to be approximately 1,104,000 bcm (Table 2-1). The Proposed Action would involve the removal of topsoil and vegetation at the three former borrow sites in preparation for excavation and transport of aggregate fill material. Prior to any material being excavated for use as backfill, the material would be sampled and the top 30 cm (12 in.) of topsoil would be stockpiled for redistribution across the disturbed area to facilitate successful site restoration. The sites would be developed in small sections to ensure only the area needed for material is disturbed. Borrow material would be excavated on an as-needed basis.

Figure 3-1. Locations of Proposed Action and Alternative Action Borrow Sites.



ERC:dhf:11/21/02:/home/dhfenske/projects/marceate/190hnpits/ap-100pits.aml:Rev. 2 Database: 11/21/02 3:18 PM

Excavation of fill material would be limited to the dimensions and volumes estimated in this EA. However, backfill needs have not been estimated for solid waste burial ground remediation in these areas, and additional impacts would be evaluated should the footprint of excavation exceed greater than 10% of the footprint area estimated in this EA. The Proposed Action would take place over a period of approximately 10 years, in accordance with commitments to clean up the 259 km^2 (100 mi^2) associated with the Columbia River Corridor before calendar year 2012, as stated in the *April 2001 Report to Congress Hanford Site Columbia River Corridor Cleanup* (DOE-RL 2001a).

A portion of the proposed borrow site in the 100-N Area contains two solid waste sites consisting of nonhazardous, nonradioactive debris, which would require removal before excavation of borrow material. Solid wastes associated with these sites would be removed and disposed appropriately, and confirmatory sampling to verify proper cleanup of the solid waste sites would be performed prior to its use.

The Proposed Action would also include ensuring adequate access is provided to the borrow locations. Existing haul roads would require upgrades, and new roads would be constructed for the transportation of borrow material within the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) remedial action areas. Appropriate utilities would be provided, and may include portable generators or extension of power lines for lighting, installation of trailers for personnel, and portable toilets.

Conventional industrial equipment would be used to excavate and transport the borrow material. For example, scrapers, power shovels, or front-end loaders could be used to excavate materials.

Ecological and cultural resource reviews have been performed for the proposed borrow areas. Such reviews would also be performed annually to renew Hanford Site excavation permits and to prevent additional impacts should the status of any of the borrow areas change during that time. This would include the construction of any new haul roads, as needed.

Mitigation activities for potential habitat loss from borrow site excavation and construction of haul roads would be performed as necessary. Topsoil from the expansion areas of the borrow sites and surface materials from construction of roads would be stockpiled for future use in restoration when closing the sites. Mitigation actions performed, including revegetation of borrow sites and haul roads, would be consistent with resource management plans that have been developed for the Hanford Site, including the following:

- *Bald Eagle Site Management Plan for the Hanford Site, South-Central Washington* (DOE-RL 1994)
- *Hanford Site Biological Resources Mitigation Strategy* (DOE-RL 2003)
- *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a)
- *Threatened and Endangered Species Management Plan: Salmon and Steelhead* (DOE-RL 2000b)

- *Mitigation Action Plan for the 100 and 600 Areas of the Hanford Site* (DOE-RL 2001d)
- *Hanford Site Biological Resources Management Plan* (BRMaP) (DOE-RL 2001c)
- *Draft Hanford Cultural Resources Management Plan* (DOE-RL 2001b)
- Other plans under preparation (e.g., *Draft Aesthetic and Visual Resources Management Plan*).

3.2 ALTERNATIVES TO THE PROPOSED ACTION

Alternatives to the Proposed Action are described in the following subsections.

3.2.1 No-Action Alternative

Under the No-Action Alternative, excavation of borrow materials would continue for site maintenance activities and remediation under CERCLA records of decision. Backfill material would be extracted from the existing Pits 18, 21, and 23. Remedial actions in the 100-F and 100-H Areas would use Pits 18 and 21, respectively, and the 100-N and 100-K Area remedial actions would use Pits 21 and 23.

Pit 18 is located along F Avenue and Route 2 North (Figure 3-1). This pit has been used intermittently over the past several years for small quantities of backfill material. The use of Pit 18 for backfill material would require construction of a 9-m (30-ft)-wide by 2.4-km (1.5-mi)-long access road adjacent to F Avenue to provide safe access from the pit to the remediated waste sites in the 100-F Area during backfill operations. The area surrounding Pit 18 is high-quality habitat dominated by mature rabbitbrush with minor amounts of sagebrush, and disturbance or destruction of such a resource would require mitigation and restoration (DOE-RL 2001c).

Pit 21 is located south of the 100-D Area and north of Route 2 North. The southern portion of the site is bounded by Route 2 North and has been restored and revegetated with native species. The northern edge of this pit is bounded by power lines, and the eastern boundary of the site is restricted by a road. Any expansion of this borrow site would be restricted to the western boundary. This alternative would require construction of new haul roads from Route 2 to the 100-H, 100-N, and 100-K Reactor Areas.

Pit 23 is located south of Route 1 and east of Route 4 North. The site has been used intermittently for backfill material over the past several years. Route 4 North and Route 1, respectively, would be used to transport material to the 100-N and 100-K Reactor Areas. Additionally, new or upgraded haul roads would be required to transport fill material to the respective remediation areas.

3.2.2 Use of Pits 19 and 20 and Construction of New Haul Roads to Supply Fill Material for the 100-F and 100-H Areas

In lieu of using the borrow sites described under the Proposed Action or No-Action Alternative, this alternative would consist of using existing borrow areas (Pits 19 and 20) to support backfill requirements for remedial actions in the 100-F and 100-H Areas. Pits 19 and 20 are located along the Columbia River shoreline between the 100-F and 100-H Areas (Figure 3-1), within the bald eagle nest/roost restricted use area (Appendix A, Figure A-1) as identified in the *Bald Eagle Site Management Plan* (DOE-RL 1994). Pits 19 and 20 are located within the "Preservation" land-use area as designated in the HCP EIS (DOE 1999) and have been recommended for closure in the *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a). Use of Pits 19 and 20 to support backfill requirements in the 100-F and 100-H Areas would require improvement or construction of haul roads and would be restricted to times of the year when eagles are not present. Additional material would need to be identified to support backfill requirements in the 100-K and 100-N Areas.

3.2.3 Use of Other Existing Onsite Borrow Material Sources

This alternative would use other existing onsite borrow pits as a source of backfill for remedial action projects in the 100-F, 100-H, 100-K, and 100-N Areas. There are six active borrow sites (i.e., Pits 30, 31, 32, 33, 34, and 35) identified in the 200 Areas and two active borrow sites (Pits 6 and 9) located in the 300 Area that would be potential sources of onsite fill material. These locations are identified and described in both the *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a) and *Environmental Assessment for Use of Existing Borrow Areas, Hanford Site, Richland, Washington* (DOE 2001). This alternative would require upgrading existing roads or the construction of new roads.

3.2.4 Procurement of Offsite Materials

Procurement of offsite materials could be used to supplement existing available fill material, or as an exclusive source. This alternative would require establishing contracts with offsite commercial entities. Offsite commercial suppliers of borrow materials are available. Local entities include Acme Materials and Construction Company, Central Pre-Mix Concrete Company, Transtate Asphalt Company, and EUCON Corporation.